

# **Building Inspection Guidelines**

## **City of Leander Inspections and Permits**



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## **Preface**

The following information has been arranged as a guideline for the construction process for builders and contractors working within the inspection jurisdiction of the City of Leander. Some items are clearly defined within the current City of Leander Ordinance, while others are standard procedures set forth by the Inspections and Permits Division of the City of Leander.

This material is to be used as a guideline only and may not include all circumstances or building practices that occur in the field.

**\*\*\*In order to provide for quality, cost effective construction, please familiarize yourself with these guidelines.\*\*\***

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## ***Required Inspections***

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- Plumbing Rough
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- Water / Sewer Yard Lines
- Water Distribution Lines
- Plumbing Rough Test
- Engineer's Pre-pour Report
- Plumbing Top-out / Gas Test (if applicable)
- Electrical Rough
- Mechanical Rough
- Frame
- Insulation
- Sheetrock/Firewall
- Permanent Power (electric meter release)
- 2<sup>nd</sup> Gas Test (gas meter release) (if applicable)
- Plumbing Final
- Electrical Final
- Mechanical Final
- Site/Landscaping (For Certificate of Completion)
- Building Final (For Certificate of Occupancy)

# *Inspection Descriptions*

*Layout* — Foundation form boards to be in place and “form survey” to be posted on site or submitted to the Inspections office. String lines shall be allowed to mark property lines if the geographical layout of the property permits. Portable toilet facilities shall be in place for every two adjacent work sites. Trash/building material containers shall be in place for every two work sites if using a “roll off” type dumpster or, every single work site if using a minimum eight foot by eight foot (8' x 8') plywood box, constructed to withstand its purpose. Safety fence shall be in place when construction site is adjacent to a building completed or near completion. Silt fence shall be in place if deemed necessary for erosion control. Tree protection shall be in place. Address posted, visible from the street. **Current Ordinance requires the use of Clawson Disposal (512.259.1709) for all trash and haul-off service. Clawson Fee Schedule is available at Permits Department.**

*Temporary Power (T-Loop, T-Pole)* — The visual inspection of a temporary power pole or pedestal located at the work site, according to the 2005 National Electrical Code.

*Plumbing Rough* — The visual inspection and testing of proper installation according to the current adopted Plumbing Code (2003 International Codes). This inspection requires an air test of 5 pounds per square inch (5 psi) or a ten foot head (10') of water column above the highest fitting. Plumbing system shall not be buried or covered.

*Temporary Water Service* — The visual inspection of a temporary riser installed for temporary construction water use. Temporary water service shall consist of a backflow device (Watts No. 7), a customer shut-off valve, and hose bib. (Diagram can be obtained from our office.)

*Water/Sewer Yardlines* — A visual inspection and testing of the building sewer and water service installed from the structure to the utility taps. This inspection requires proper separation of services and burial depths as required by the 2003 International Codes. Sewer line tests shall consist of a ten foot head (10') of water column above the highest fitting. Backwater valves are required on applications deemed necessary by the 2003 International Codes. Water lines do not need to be connected to the water supply lines within the structure. Water meter boxes/vaults shall be properly installed for proper placement of meter(s). Water meter boxes shall not be damaged or missing. Required backflow devices and customer shut-off valves shall be in place. Pressure reducing valves shall be in place, if required.

*Water Distribution Lines (Copper)*— The visual inspection and testing of the water distribution lines within the foundation of the structure. The test required for this inspection shall maintain a minimum fifty pounds per square inch (50 psi) gauge test. This inspection will be performed AFTER the installation of reinforcing rods and/or cables within the foundation area.

*Engineer's Pre-pour* — This inspection is currently being performed by the Engineer of record for said construction. The Engineer's approved inspection report shall be on site.

*Plumbing Topout* — Visual inspection and test of the water supply and building drainage system, in accordance with the 2003 International Codes, within the building envelope. The water supply shall maintain a minimum 50 psi gauge test. The DWV shall be water tested above the highest fitting. Tubs/showers shall be tested to the flood rim level and/or overflow drain.

*Electrical Rough* — A visual inspection of the electrical wiring and panel(s) must be in accordance with the 2005 National Electrical Code.

*Mechanical Rough* — A visual inspection of the mechanical ducts and equipment must be in accordance with the 2003 International Mechanical Code.

*1<sup>st</sup> Gas Test (if applicable)* — A visual inspection and testing of the gas piping must be in accordance with the 2003 International Fuel Gas Codes. The inspection requires a minimum 20 psi gauge test with all valves in the open position. Bubble testing shall be required if deemed necessary by the Building Inspector.

*Frame* — A visual inspection of the structural components of the building envelope. The Frame Pack inspection shall be approved prior to the installation of masonry and/or insulation.

*Insulation* — A visual inspection in accordance with the 2003 International Energy Conservation Codes.

*Sheetrock/Firewall* — Not currently a required inspection but may be performed if deemed necessary by the Building Inspector. All required fire rated walls shall be inspected by the Building Inspector and/or the Fire Marshal.

*Permanent Power (Meter Release)* — A visual inspection must be in accordance with the 2005 National Electrical Code. All wiring shall be properly terminated or contained within a covered outlet box prior to the issuance of a permanent electric meter. This inspection may be scheduled any time after the installation of electrical trim components. All equipment and panels (including meter can) shall be properly bonded. Panels shall be labeled.

*2<sup>nd</sup> Gas (Meter Release)* — The visual inspection and testing of the gas piping system prior to the release of the gas meter. The system shall maintain a minimum 20 psi gauge test. All gas stops shall be in place at this time.

*Final Plumbing* — Visual inspection and testing of the plumbing system in accordance with the 2003 International Plumbing Code. All properties required to discharge to a private sewage disposal system shall have an approved certificate of completion from the County in which the property is located.

*Final Electric* — Visual inspection and testing of electrical components in accordance with the 2005 National Electrical Code.

*Final Mechanical* — Visual inspection and testing of mechanical components in accordance with the 2003 International Mechanical Code. Air conditioning start-up is required.

*Landscaping* — Visual inspection for compliance with the current City of Leander Landscape Ordinance. All landscaping shall be completed at the time of Building Final.

*Site* — Visual inspection for completion of required/necessary components of the property. This shall include, but not limited to, sidewalks, flatwork, fences, parking, drainage and signage (if required).

*Building Final* — Includes visual inspection of the proper completion, allowing for the issuance of a Certificate of Occupancy.

# ***Common Building Inspector Turndowns***

## ***(Does not include other Departments)***

### **LAYOUT**

- Form survey not on file
- Trash receptacle not provided
- Safety fence not provided
- Erosion control not in place
- Portable toilet not provided
- Trees not protected

### **TEMPORARY METER LOOP**

- Not supported / secure properly
- Ground termination not to code
- Provide 220 A receptacle
- Receptacle(s) not GFCI protected
- Damaged / needs repair
- Missing / not complete
- Not ready

### **PLUMBING ROUGH**

- Buried/covered, unable to inspect
- Provide 10' head of water or 5 psi air test
- Water test on DWV not holding
- Building drain not sleeved through exterior beam(s)
- Maintain ¼ inch per foot
- Provide proper bed/fill material
- Clear debris from trench
- Damaged / needs repair
- Missing / not complete
- Not ready

### **WATER / SEWER YARDLINES**

- Separate water and sewer
- Burial depth not to code
- Maintain ¼ inch per foot
- Provide 10' head on DWV
- Clean trench
- Provide proper bed/fill material
- Pipe not supported properly
- Backflow not installed
- Damaged / needs repair
- Missing / not complete
- Not ready

### **WATER DISTRIBUTION LINES**

- Air/water test not holding
- Crimped / cut, needs repair
- Unapproved joints in slab
- Copper not sleeved in concrete
- Rough plumbing test not holding
- UFER ground not in place
- Missing / not complete
- Not ready

### **PLUMBING TOP OUT**

- Venting requirements not met
- Water test on DWV not holding
- Air/water test on copper not holding
- Tub drains not open for proper test
- Copper in contact with dissimilar metal
- Gas vents not to code
- Gas test not holding at 20 psi
- Gas piping not protected through masonry
- Pipe not supported or properly secured
- Protect pipe
- Damaged / needs repair
- Missing / not complete
- Not ready

### **ELECTRICAL ROUGH**

- Wire to be in raceway
- Wire damaged, needs repair
- Receptacles spaced greater than 12'
- Nail plates required at studs/plates
- Secure wires in panel
- Aluminum wiring not allowed (per City Ordinance)
- Smoke detector placement not to code
- Stairway lighting not to code
- Wire not supported or properly secured
- Protect wire
- Ground termination not to code
- Missing / not complete
- Not ready

### **MECHANICAL ROUGH**

- Crimped duct
- Duct not properly sealed
- Not supported / secure properly
- Dryer vent not to code
- Vent hood duct not to code
- Exhaust fans not to code
- Plenums not properly sealed
- Combustion air not to code
- Return / supply air too close to gas burning appliance
- Damaged / needs repair
- Missing / not complete
- Not ready

### **GAS TEST**

- Pipe not protected through masonry
- Test not holding at 20 psi
- Damaged / Needs repair
- Not Ready

# *Common Turndowns*

## FRAME

- Seal/secure exterior sheathing
- Seal untreated lumber
- Seal/secure exterior penetrations
- Engineered trusses not installed per design
- Provide Engineer's repair detail
- Over cut studs/plates
- Glue/shim headers
- Rafters not to code
- Joist hangers missing
- Double studs where required
- Windows do not meet egress
- Windbrace not to code
- Attic access not to code
- Tempered glass where required
- Stair risers/treads not to code
- Fire block not to code
- Not supported / secure properly
- Masonry requirements not met
- Headers/joists over spanned
- Draft stop not to code
- Provide moisture barrier
- Bottom plates not secured
- Fireplace clearances not met
- Truss hangers / ledgers not to code
- Make site safe and sanitary
- Strap plates / studs
- Nail schedule not to code
- Attic ventilation requirements not met
- Damaged / needs repair
- Missing / not complete
- Not ready

## PERMANENT POWER

- Wire termination not to code
- Exposed wire
- Fixture / cover plates missing
- Wire not properly secured
- Service equipment not properly bonded

## 2<sup>nd</sup> GAS TEST

- Provide 20 psi gauge test
- Gas stub-out not connected to riser
- Damaged pipe / riser
- Not ready

## PLUMBING FINAL

- Vent termination not to code
- Paint plumbing vents
- Provide anti-siphon device on hose bibs

## PLUMBING FINAL

- Water heater drain termination not to code
- Water heater not to code
- Drain pan required
- Expansion tank required
- Leak in DWV
- Leak in water supply
- T & P relief not to code
- Gas vents in contact with combustibles
- Copper in contact with dissimilar metal
- Low water pressure
- Water closet / faucets / valves run continuous
- Clean / repair meter box
- Insulate copper
- Private sewage disposal certificate not posted.
- Damaged / needs repair
- Missing / not complete
- Not ready

## ELECTRICAL FINAL

- Wire termination not to code
- Smoke detectors not to code
- Smoke detectors beeping or not functioning (low or bad battery)
- ARC fault not to code
- Fixture/cover plates missing
- Stairway illumination not to code
- Wire not properly secured
- Power not on
- Label GFCI's
- Label electrical panel(s)
- Label panel with ground termination locations
- Caulk around exterior devices
- Duplex receptacle not permitted for vent hood
- Wire damaged
- Ground / bond termination not to code
- Provide knock-out plug(s)
- Provide panel cover
- Not ready

## MECHANICAL FINAL

- SEER requirements not met
- Programmable thermostat required (Commercial)
- Energy Efficiency requirements not met
- Not supported / secure properly
- Gas vent in contact with combustibles
- Gas vent termination not to code
- Drain pan required

# *Common Turndowns*

## MECHANICAL FINAL

- Condensate drain not to code
- Combustion air not to code
- Dryer vent to code
- Crimped duct
- Raise / level A/C pad
- Protect duct
- Missing / not complete
- Damaged / needs repair
- Not ready

## BUILDING FINAL

- Seal/secure exterior penetrations
- Landscape requirements not met
- Flatwork damaged / needs repair
- Clean flatwork
- Clean site/street
- Exterior seal not complete
- Screens missing
- Occupied prior to finals
- Weep holes to be 33" on center
- Maintain 6" clearance from finished floor to grade
- Provide weather strips
- Provide insulation certificate
- Finish yard / grade to drain
- Provide street address
- Provide anti-tip device on range
- Attic access not to code
- Catwalk not to code
- Adjust doors
- Hardware missing
- Provide fire rated attic access
- Address not posted
- Work in progress
- Missing / not complete
- Damaged / needs repair
- Not Ready



# *Contacts*

## **ATTENTION: CONTRACTORS AND PROPERTY OWNERS**

Approval of permits by the City of Leander does not exempt you from complying with current or future federal, state, or regional development requirements.

For your assistance we are providing the following contacts to answer your questions or concerns.

### Williamson County Health District

Private Sewage Facility

(512) 930-4390

### U.S. Department of Energy (ResCheck Form/Information)

[www.energycodes.gov](http://www.energycodes.gov)

### Federal Emergency Management Agency (FEMA)

Flood Plain Information 1-800-638-6620

### Texas Commission on Environmental Quality (TCEQ), formerly TNRCC

Drainage Issues (512) 239-1000

### U.S. Fish & Wildlife Services

Habitat/Endangered Species/Caves (512) 490-4390

### Inspections and Permits

[www.leandertx.org](http://www.leandertx.org) (most applications are available online)

[permits@ci.leander.tx.us](mailto:permits@ci.leander.tx.us) (General email)

(512) 528-2823- Carla Woods: Commercial Permits Clerk

(512) 528-2752- Danielle Radecki: Residential Permits Clerk

(512) 528-2744- Al Hamilton: Senior Building Inspector

(512) 528-0723- Monica Sanders: Residential Plan Reviewer

(512) 528-2748- Inspection Request Line

(512) 259-0660- Permits Department Fax

[carla.woods@ci.leander.tx.us](mailto:carla.woods@ci.leander.tx.us)

[dradecki@ci.leander.tx.us](mailto:dradecki@ci.leander.tx.us)

[al.hamilton@ci.leander.tx.us](mailto:al.hamilton@ci.leander.tx.us)

[msanders@ci.leander.tx.us](mailto:msanders@ci.leander.tx.us)

### Fire Department Administration

(512) 528-2854- Jerry Williams: Fire Chief

(512) 528-1664- Bill Gardner: Deputy Fire Chief

[jerry.williams@ci.leander.tx.us](mailto:jerry.williams@ci.leander.tx.us)

[bgardner@ci.leander.tx.us](mailto:bgardner@ci.leander.tx.us)

### Planning and Community Development

(512) 528-2732- David Hutton: Director

(512) 528-2736- Robin Griffin: Senior Planner

(512) 528-2750- Ellen Pizalate: Planning Coordinator

[david.hutton@ci.leander.tx.us](mailto:david.hutton@ci.leander.tx.us)

[rgriffin@ci.leander.tx.us](mailto:rgriffin@ci.leander.tx.us)

[epizalate@ci.leander.tx.us](mailto:epizalate@ci.leander.tx.us)

### Engineering

(512) 528-2760- Wayne Watts: Director/City Engineer

(512) 563-7552- Milton Kokel: Utilities Inspector

(512) 528-2765- Sean Lafferty: GIS

[w.watts@ci.leander.tx.us](mailto:w.watts@ci.leander.tx.us)

[mkokel@ci.leander.tx.us](mailto:mkokel@ci.leander.tx.us)

[sean.lafferty@ci.leander.tx.us](mailto:sean.lafferty@ci.leander.tx.us)

# ***Requirements for a Certificate of Occupancy***

Please use this checklist for project completion and issuance of a Certificate of Occupancy. Some items do not pertain to Commercial Finish-outs and Remodels. If your project required a Site Development Permit or site improvements, you will need a Certificate of Completion.

- ☐ **Building Final** (Building Inspector)
  - ☐ Electrical Final
  - ☐ Plumbing Final
  - ☐ Mechanical Final
  
- ☐ **Fire Final** (Fire Inspector)
  - ☐ Fire Sprinkler
  - ☐ Fire Alarm
  - ☐ Fire Lanes
  - ☐ Egress / Life Safety
  
- ☐ **Certificate of Completion** (Planning Department)
  - ☐ Landscaping (Planning)
  - ☐ Parking (Planning)
  - ☐ General Site Requirements (Planning)
  - ☐ Drainage and Detention (Engineering)
  
- ☐ **Outstanding Fees** (Permits Department)
  
- ☐ **Issuance of Certificate of Occupancy** (Permits Department)

It is the Contractor's responsibility to contact each department directly to schedule an inspection.

Building and Fire Inspectors – 512.528.2748

Planning Department – 512.528.2750

Engineering – 512.528.2721